Redescription and New Data on Distribution of 
*Glyphomerus flavabdomen* with a Key to the Palaearctic Species of the Genus 
*Glyphomerus* (Hymenoptera, Torymidae).

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**Introduction**

The genus *Glyphomerus* includes nine species in the Palaearctic region (Grissell, 1995; Noyes, 2017). *Glyphomerus flavabdomen* Zerova was originally described from Iran (Zerova et al., 2008). This species was reared by Dr. Karimpour in the North-Western of Iran from galls of *Hedickiana levantina* (Hedicke) (Cynipidae) on *Salvia* sp. (Lamiaceae). Now this species is found in the material received from Georgia. Detailed illustrated redescription of *G. flavabdomen* including the characters of the illustrated specimens from Georgia is discussed. Proposed key to the Palaearctic *Glyphomerus* species includes species which have not been previously included (Zerova, Seryogina, 1999; Stojanova, 2005).
**Glyphomerus flavabdomen** Zerova 2008 (fig. 1–4)


**Material.** Type. Holotype ♀: Iran: Urmia, Seer Montain, h = 1400 m, ex galls on stems of *Salvia* sp. (Lamiaceae) induced by *Hedickiana levantina* (Hedicke) (Cynipidae), em. 11–18.07.2007 (Karimpour). Paratypes: 31 ♀, 26 ♂ (labels as in the holotype) (SIZK).

Non-type. **Georgia**: Tbilisi, Botanical Garden, dry stone slopes, from cynipid galls on stems (plant was not identified), coll. 20.06.1976, reared 12.07.1976, 3 ♀, 3 ♂ (Khodjevanishvili) (SIZK).

**Description**

Female. Body length 2.3–3.5 mm, holotype 2.5 mm (without ovipositor), ovipositor sheaths a little longer than metasoma length (60 : 41) (in profile). Head and mesosoma dark green with bronze shine, on some specimens bright green, all coxa dark green, femur brown, tibia variable from yellowish-brown to yellow, tarsi yellow. Metasoma in some specimens including holotype yellow, in other specimens basal part of metasomal terga yellow, especially terga 1–2 yellow, last tergum brown with dark green reflection; colour of metasoma variable; ovipositor brown. Fore wing with dark spot below stigma, veins and pubescence on wing disc dark brown.

Head from above slightly wider than pronotum, twice broader than long (65 : 33); temples short, not bulging with converging sides, POL almost three times longer than OOL (17 : 6). Head in frontal view: width to height in ratio 65 : 49; malar space shorter than eye length in ratio 12 : 26; anterior margin of clypeus straight, eye with sparse short hairs. Head with finely reticulate surface and dense pubescence. Antenna inserted slightly below middle of face; scrobal depression reaching median ocellus; scape almost reaching median ocellus; scape long, 5 times as long as its width (26 : 5); anellus strongly transverse, first flagellar segment somewhat elongate, second a little elongate, flagellomere 5–7 transverse; club thin, 3-segmented. Flagellum closed with short white adpressed hairs.

![1](image1) ![2](image2) ![3](image3) ![4](image4)

Fig. 1–4: **Glyphomerus flavabdomen** Zerova: 1 — female, lateral view; 2 — abdomen and ovipositor; 3 — fore wing venation; 4 — antenna.
Mesosoma: distinctly bulging in profile, dorsal surface of mesosoma reticulate and shiny with short, white pubescence; pronotum (from above) three times as wide as long, tegula green. Propodeum finely reticulate. Fore wing in basal third bare, only costal cell (from above) with some very short hairs; the last part of wing disc with sparse brown hairs; one elongated brown spot under stigmal vein and other little spot under distal part of parastigma; marginal, postmarginal and stigmal vein as 20 : 22 : 5; radial vein shortly petiolate. Hind coxa punctuated, hind femur thickened. Metepisternum with fine punctuation, mesepimeron without distinct sculpture.

Metasoma: metasoma somewhat longer than mesosoma (7 : 4) with distinct punctured surface and long thick pubescence on terga 2–6. Ovipositor longer than metasoma, ovipositor index (ratio length of ovipositor to length of hind tibia) 2.2 (20 : 9).

Male. Body length 1.5–3.0 mm, differs from female by stouter funicle. Colour of metasoma variable as in female from yellow to almost green dorsally with yellow colour on ventral side. Specimens from Georgia entirely dark-green.

Variation

In original description of *G. flavabdomen* we noted that coloration of abdomen of female is variable from entirely yellow to dark-green with yellow spots only on two or three first terga. Some specimens have also yellow spots on lateral sides of mesosoma. In specimens from Georgia all females have yellow spots only on first metasomal tergum.

Coloration of male body is more variable. In specimens from Iran colour of metasoma is variable as in female, from yellow to almost green dorsally with yellow colour on ventral side, but in specimens from Georgia metasoma is wholly dark-green.

Trophical associations and distribution of Palaearctic *Glyphomerus* species

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<td><em>Diplolepis</em> spp. (<em>Cynipidae</em>) on <em>Rosa</em> spp. (Rosaceae)</td>
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Key to the Palearctic species of *Glyphomerus* Förster

1. Pronotum in dorsal view with anterior corners prominent, below the corners with deep holes laterally. Propodeum with distinct median carina and two short carina laterally. Ovipositor as long as abdomen (laterally). Body black with green reflection. Scape yellow at least below. In galls of *Diplolepis* spp. (*Cynipidae*) on *Rosa canina*. — Austria, Ukraine, Kyrgyzstan, Tajikistan. .............................

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4. Malar space short; 0.25 to 0.33 length of eye. ................................................................. 5

5. Malar space longer; 0.4–0.55 length of eye. ........................................................................ 6

6. First funicular segment distinctly transverse. ................................................................. 7

7. The second to seventh funicular segments subquadrate; club as broad as funicle. Marginal and postmarginal veins subequal in length. Ovipositor as long as metasoma and 1.85 times longer than hind tibia. Fore wing infumate with 2 connected maculae. Stigmal vein about half as long as marginal vein. In galls of some *Tetramesa* (Eurytomidae) species on *Festuca* spp. and *Aneurolepidium ramosum* (Poaceae). — Ukraine, Russian Federation (Astrakhan’). .......................................................... *G. isosomatis* Zerova et Seryogina

8. Marginal vein 1.8 times as long as postmarginal vein and 3.0 times as long as stigmal vein. Second funicular segment slightly elongate. Fore wing with two dark spots. In cynipid galls on *Potentilla* spp. (Rosaceae). — Palearctic Region. .............................................................. *G. tibialis* ( Förster)

9. Marginal vein 1.2 times as long as postmarginal vein and 2.4 times as long as stigmal vein. The second funicular segment quadrate. Fore wing infumate with one dark spot under the stigmal vein. Ovipositor as long as metasoma. In galls of *Aylax hypecoi* (Cynipidae) on *Hypecoum imberbe* (Hypecooaceae) — Bulgaria. .......................................................... *G. aylax* Stojanova

References

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